

**FAX  
BESTÄTIGUNG  
CONFIRMATION**

**PCT  
REQUEST**

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

EPO - Munich  
68

16 Jan. 2004

For receiving Office use only

PCT/EP04/00162  
International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) R 42991

**Box No. I TITLE OF INVENTION**

Methods for Preventing and Treating Alzheimer's Disease (AD)

**Box No. II APPLICANT**

☒ This person is also inventor

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

MATTNER, Frank  
Krottenbachstrasse 267  
1190 Vienna  
AT

Telephone No.

Facsimile No.

Teleprinter No.

Applicant's registration No. with the Office

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant  
for the purposes of:

☒ all designated  
States

☐ all designated States except  
the United States of America

☐ the United States  
of America only

☐ the States indicated in  
the Supplemental Box

**Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)**

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

This person is:

☐ applicant only

☐ applicant and inventor

☐ inventor only (If this check-box is  
marked, do not fill in below.)

Applicant's registration No. with the Office

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant  
for the purposes of:

☐ all designated  
States

☐ all designated States except  
the United States of America

☐ the United States  
of America only

☐ the States indicated in  
the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

**Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE**

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☒ agent

☐ common  
representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

SONN & PARTNER PATENTANWAELTE

Riemergasse 14  
1010 Vienna  
AT

Telephone No.

+43 1 512 84 05

Facsimile No.

+43 1 512 98 05

Teleprinter No.

Agent's registration No. with the Office

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) R 42991

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AT

State (that is, country) of residence:

AT

This person is applicant  
for the purposes of:



all designated  
States



all designated States except  
the United States of America



the United States  
of America only



the States indicated in  
the Supplemental Box

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This person is:



applicant only



applicant and inventor



inventor only (If this check-box is  
marked, do not fill in below.)

Applicant's registration No. with the Office

State (that is, country) of nationality:

State (that is, country) of residence:

This person is applicant  
for the purposes of:



all designated  
States



all designated States except  
the United States of America



the United States  
of America only



the States indicated in  
the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on a continuation sheet.

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agent



common  
representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

SONN & PARTNER PATENTANWAELTE

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Agent's registration No. with the Office

☐ Address for correspondence: Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

**Box No. V DESIGNATIONS**

The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.

However,

- ☐ DE Germany is not designated for any kind of national protection
- ☐ KR Republic of Korea is not designated for any kind of national protection
- ☐ RU Russian Federation is not designated for any kind of national protection

*(The check-boxes above may be used to exclude (irrevocably) the designations concerned in order to avoid the ceasing of the effect, under the national law, of an earlier national application from which priority is claimed. See the Notes to Box No. V as to the consequences of such national law provisions in these and certain other States.)*

**Box No. VI PRIORITY CLAIM**

The priority of the following earlier application(s) is hereby claimed:

| Filing date<br>of earlier application<br>(day/month/year) | Number<br>of earlier application | Where earlier application is:                        |   |  |
|---|----------------------------------|--|---|--|
|   |                                  | national application:<br>country or Member<br>of WTO | regional application:*<br>regional Office | international application:<br>receiving Office |
| item (1)<br>14 January 2003<br>(14.01.2003)               | A 36/2003                        | AT   |   |  |
| item (2)<br>17. September 2003<br>(17.09.2003)            | A 1464/2003                      | AT   |   |  |
| item (3)  |                                  |  |   |  |

☐ Further priority claims are indicated in the Supplemental Box.

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office) identified above as:

☐ all items    ☐ item (1)    ☐ item (2)    ☐ item (3)    ☐ other, see Supplemental Box

\* Where the earlier application is an ARIPO application, indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed (Rule 4.10(b)(ii)): ....

**Box No. VII INTERNATIONAL SEARCHING AUTHORITY**

**Choice of International Searching Authority (ISA)** (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / .....

**Request to use results of earlier search; reference to that search** (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year)

Number

Country (or regional Office)

**Box No. VIII DECLARATIONS**

The following declarations are contained in Boxes Nos. VIII (i) to (v) (mark the applicable check-boxes below and indicate in the right column the number of each type of declaration):

|   |  | Number of<br>declarations |
|---|--|---------------------------|
| <input type="checkbox"/> Box No. VIII (i)             | Declaration as to the identity of the inventor   | :                         |
| <input type="checkbox"/> Box No. VIII (ii)            | Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent             | :                         |
| <input type="checkbox"/> Box No. VIII (iii)           | Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application | :                         |
| <input checked="" type="checkbox"/> Box No. VIII (iv) | Declaration of inventorship (only for the purposes of the designation of the United States of America)                               | : 1                       |
| <input type="checkbox"/> Box No. VIII (v)             | Declaration as to non-prejudicial disclosures or exceptions to lack of novelty   | :                         |

**Feld Nr. VIII (iv) ERKLÄRUNG: ERFINDERERKLÄRUNG (nur im Hinblick auf die Bestimmung der Vereinigten Staaten von Amerika)**

*Die Erklärung muß dem in Abschnitt 214 vorgeschriebenen Wortlaut entsprechen; siehe Anmerkungen zu den Feldern VIII, VIII (i) bis (v) (allgemein) und insbesondere die Anmerkungen zum Feld Nr. VIII (iv). Wird dieses Feld nicht benutzt, so sollte dieses Blatt dem Antrag nicht beigelegt werden.*

**Erfindererklärung (Regeln 4.17 Ziffer iv und 51bis.1 Absatz a Ziffer iv)  
im Hinblick auf die Bestimmung der Vereinigten Staaten von Amerika:**

Ich erkläre hiermit an Eides Statt, daß ich nach bestem Wissen der ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein Erfinder angegeben ist) oder Miterfinder (falls nachstehend mehr als ein Erfinder angegeben ist) des beanspruchten Gegenstandes bin, für den ein Patent beantragt wird.

Diese Erklärung wird im Hinblick auf und als Teil dieser internationalen Anmeldung abgegeben (falls die Erklärung zusammen mit der Anmeldung eingereicht wird).

Diese Erklärung wird im Hinblick auf die internationale Anmeldung Nr. PCT/..... abgegeben (falls diese Erklärung nach Regel 26ter eingereicht wird).

Ich erkläre hiermit an Eides Statt, daß mein Wohnsitz, meine Postanschrift und meine Staatsangehörigkeit den neben meinem Namen aufgeführten Angaben entsprechen.

Ich bestätige hiermit, daß ich den Inhalt der oben angegebenen internationalen Anmeldung, einschließlich ihrer Ansprüche, durchgesehen und verstanden habe. Ich habe im Antragsformular dieser internationalen Anmeldung gemäß PCT Regel 4.10 sämtliche Auslandsanmeldungen angegeben und habe nachstehend unter der Überschrift "Frühere Anmeldungen", unter Angabe des Aktenzeichens, des Staates oder Mitglieds der Welthandelsorganisation, des Tages, Monats und Jahres der Anmeldung, sämtliche Anmeldungen für ein Patent bzw. eine Erfinderurkunde in einem anderen Staat als den Vereinigten Staaten von Amerika angegeben, einschließlich aller internationalen PCT-Anmeldungen, die wenigstens ein anderes Land als die Vereinigten Staaten von Amerika bestimmen, deren Anmeldetag dem der Anmeldung, deren Priorität beansprucht wird, vorangeht.

Frühere Anmeldungen: .....

Ich erkenne hiermit meine Pflicht zur Offenbarung jeglicher Informationen an, die nach meinem Wissen zur Prüfung der Patentfähigkeit in Einklang mit Title 37, Code of Federal Regulations, § 1.56 von Belang sind, einschließlich, im Hinblick auf Teilfortsetzungsanmeldungen, Informationen, die im Zeitraum zwischen dem Anmeldetag der früheren Patentanmeldung und dem internationalen PCT-Anmeldedatum der Teilfortsetzungsanmeldung bekannt geworden sind.

Ich erkläre hiermit, daß alle in der vorliegenden Erklärung von mir gemachten Angaben nach bestem Wissen und Gewissen der Wahrheit entsprechen, und ferner, daß ich diese eidesstattliche Erklärung in Kenntnis dessen ablege, daß wissentlich und vorsätzlich falsche Angaben oder dergleichen gemäß § 1001, Title 18 des US-Codes strafbar sind und mit Geldstrafe und/oder Gefängnis bestraft werden können und daß derartige wissentlich und vorsätzlich falsche Angaben die Rechtswirksamkeit der vorliegenden Patentanmeldung oder eines aufgrund deren erteilten Patentes gefährden können.

Name: MATTNER, Frank

Wohnsitz: Wien, AT  
(Stadt und US-Staat, falls anwendbar, sonst Land)

Postanschrift: Krottenbachstr. 267  
A-1190 Wien

Staatsangehörigkeit: Oesterreich

Unterschrift des Erfinders; Frank Mattner  
(falls nicht bereits das Antragsformular unterschrieben wird oder falls die Erklärung nach Einreichung der internationalen Anmeldung nach Regel 26ter berichtigt oder hinzugefügt wird. Die Unterschrift muß die des Erfinders sein, nicht die des Anwalts)

Datum: 07/01/2004  
(der Unterschrift, falls das Antragsformular nicht unterschrieben wird oder der Erklärung, die nach Regel 26ter nach Einreichung der internationalen Anmeldung berichtigt oder hinzugefügt wird)

Name: .....

Wohnsitz: .....

Postanschrift: .....

Staatsangehörigkeit: .....

Unterschrift des Erfinders: .....

Datum: .....

☐ Diese Erklärung wird auf dem folgenden Blatt fortgeführt, "Fortsetzungsblatt für Feld Nr. VIII (iv)".

**Box No. IX CHECK LIST; LANGUAGE OF FILING**

This international application contains:

(a) **in paper form**, the following number of sheets:

request (including declaration sheets) : 4  
 description (excluding sequence listing and/or tables related thereto) : 21  
 claims : 2  
 abstract : 1  
 drawings : 5

Sub-total number of sheets : 33

sequence listing :  
 tables related thereto :

(for both, actual number of sheets if filed in paper form, whether or not also filed in computer readable form; see (c) below)

Total number of sheets : 33

(b) ☐ **only in computer readable form** (Section 801(a)(i))

- (i) ☐ sequence listing  
 (ii) ☐ tables related thereto

(c) ☐ **also in computer readable form** (Section 801(a)(ii))

- (i) ☐ sequence listing  
 (ii) ☐ tables related thereto

**Type and number of carriers** (diskette, CD-ROM, CD-R or other) on which are contained the

- ☐ sequence listing :  
☐ tables related thereto :  
 (additional copies to be indicated under items 9(ii) and/or 10(ii), in right column)

This international application is accompanied by the following item(s) (mark the applicable check-boxes below and indicate in right column the number of each item):

Number of items

1. ☒ fee calculation sheet : 1
2. ☒ original separate power of attorney : 1
3. ☐ original general power of attorney :
4. ☐ copy of general power of attorney; reference number, if any: :  
 if any: :  
 if any: :
5. ☐ statement explaining lack of signature :
6. ☐ priority document(s) identified in Box No. VI as item(s): :  
 item(s): :  
 item(s): :
7. ☐ translation of international application into (language): :  
 (language): :  
 (language): :
8. ☐ separate indications concerning deposited microorganism or other biological material :
9. ☐ sequence listing in computer readable form (indicate type and number of carriers)  
 (i) ☐ copy submitted for the purposes of international search under Rule 13ter only (and not as part of the international application) :  
 (ii) ☐ (only where check-box (b)(i) or (c)(i) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Rule 13ter :  
 (iii) ☐ together with relevant statement as to the identity of the copy or copies with the sequence listing mentioned in left column :
10. ☐ tables in computer readable form related to sequence listing (indicate type and number of carriers)  
 (i) ☐ copy submitted for the purposes of international search under Section 802(b-quater) only (and not as part of the international application) :  
 (ii) ☐ (only where check-box (b)(ii) or (c)(ii) is marked in left column) additional copies including, where applicable, the copy for the purposes of international search under Section 802(b-quater) :  
 (iii) ☐ together with relevant statement as to the identity of the copy or copies with the tables mentioned in left column :
11. ☐ other (specify): :  
 other (specify): :  
 other (specify): :

Figure of the drawings which should accompany the abstract:

Language of filing of the international application:

English

**Box No. X SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE**

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

Sonn &amp; Partner Patentanwälte

Daniel ALGE, Patentanwalt

For receiving Office use only

1. Date of actual receipt of the purported international application:

3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:

4. Date of timely receipt of the required corrections under PCT Article 11(2):

5. International Searching Authority (if two or more are competent): ISA /

6. ☐ Transmittal of search copy delayed until search fee is paid

2. Drawings:

☐ received:☐ not received:

For International Bureau use only

Date of receipt of the record copy by the International Bureau:

## PATENT COOPERATION TREATY

PCT

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

From the INTERNATIONAL BUREAU

To:

SONN & PARTNER PATENTANWALTE  
Riemergasse  
A-1010 Wien  
AustriaEINGELANGT  
26. April 2004  
FRIST:

|  |  |
|--|--|
| Date of mailing (day/month/year)<br>19 April 2004 (19.04.2004)       |  |
| Applicant's or agent's file reference<br>R 42991                     | IMPORTANT NOTIFICATION   |
| International application No.<br>PCT/EP2004/000162                   | International filing date (day/month/year)<br>13 January 2004 (13.01.2004) |
| International publication date (day/month/year)<br>Not yet published | Priority date (day/month/year)<br>14 January 2003 (14.01.2003)             |
| Applicant<br>MATTNER, Frank  |  |

- By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- (If applicable) The letters "NR" appearing in the right-hand column denote a **priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau** under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, **the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.**
- (If applicable) An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a **priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b)** (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

| <u>Priority date</u>      | <u>Priority application No.</u> | <u>Country or regional Office<br/>or PCT receiving Office</u> | <u>Date of receipt<br/>of priority document</u> |
|---------------------------|---------------------------------|---|---|
| 14 Janu 2003 (14.01.2003) | A 36/2003                       | AT  | 10 Marc 2004 (10.03.2004)                       |
| 17 Sept 2003 (17.09.2003) | A 1464/2003                     | AT  | 10 Marc 2004 (10.03.2004)                       |

|   |   |
|---|---|
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland | Authorized officer<br>M-Chr. GUILLEMOT (Fax 338 8970) |
| Facsimile No. (41-22) 338.89.70   | Telephone No. (41-22) 338 9838                        |

From the INTERNATIONAL BUREAU

**PCT**

SECOND AND SUPPLEMENTARY NOTICE  
INFORMING THE APPLICANT OF THE  
COMMUNICATION OF THE INTERNATIONAL  
APPLICATION (TO DESIGNATED OFFICES  
WHICH APPLY THE 30 MONTH TIME  
LIMIT UNDER ARTICLE 22(1))

(PCT Rule 47.1(c))

To:

SONN & PARTNER PATENTANWAELTE  
Riemergasse 14  
A-1010 Wien  
AUTRICHE

27. Mai 2005  
EINGETR.

**IMPORTANT NOTICE**

Date of mailing (day/month/year)  
19 May 2005 (19.05.2005)

Applicant's or agent's file reference  
R 42991

International application No.  
PCT/EP2004/000162

International filing date (day/month/year)  
13 January 2004 (13.01.2004)

Priority date (day/month/year)  
14 January 2003 (14.01.2003)

Applicant

MATTNER, Frank

- ATTENTION:** For any designated Office(s), for which the time limit under Article 22(1), as in force from 1 April 2002 (30 months from the priority date), **does not apply**, please see Form PCT/IB/308(First Notice) issued previously.
- Notice is hereby given that the following designated Office(s), for which the time limit under Article 22(1), as in force from 1 April 2002, **does apply**, has/have requested that the communication of the international application, as provided for in Article 20, be effected under Rule 93bis.1. The International Bureau has effected that communication on the date indicated below:

AU, AZ, BY, CN, CO, DZ, EP, HU, KG, KP, KR, MD, MK, MZ, NA, RU, SY, TM, US

In accordance with Rule 47.1(c-bis)(i), those Offices will accept the present notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

- The following designated Offices, for which the time limit under Article 22(1), as in force from 1 April 2002, **does apply**, have not requested, as at the time of mailing of the present notice, that the communication of the international application be effected under Rule 93bis.1:

AE, AG, AL, AM, AP, AT, BA, BB, BG, BR, BW, BZ, CA, CR, CU, CZ, DE, DK, DM, EA, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, ID, IL, IN, IS, JP, KE, KZ, LC, LK, LR, LS, LT, LV, MA, MG, MN, MW, MX, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, SC, SD, SG, SK, SL, TJ, TN, TR, TT, UA, UZ, VC, VN, YU, ZA, ZW

In accordance with Rule 47.1(c-bis)(ii), those Offices accept the present notice as conclusive evidence that the Contracting State for which that Office acts as a designated Office does not require the furnishing, under Article 22, by the applicant of a copy of the international application.

**4. TIME LIMITS for entry into the national phase**

For the designated or elected Office(s) listed above, the applicable time limit for entering the national phase will, **subject to what is said in the following paragraph**, be **30 MONTHS** from the priority date.

In practice, **time limits other than the 30-month time limit** will continue to apply, for various periods of time, in respect of certain of the designated or elected Office(s) listed above. For **regular updates on the applicable time limits** (30 or 31 months, or other time limit), Office by Office, refer to the *PCT Gazette*, the *PCT Newsletter* and the *PCT Applicant's Guide*, Volume II, National Chapters, all available from WIPO's Internet site, at <http://www.wipo.int/pct/en/index.html>.

It is the applicant's **sole responsibility** to monitor all these time limits.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer

Agnes Wittmann-Regis

Facsimile No.+41 22 740 14 35

Facsimile No.+41 22 338 89 70

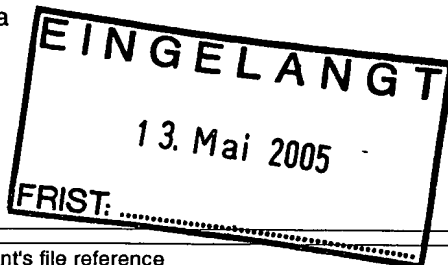
# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

## PCT

To:

SONN & PARTNER PATENTANWÄLTE  
Riemergasse 14  
A-1010 Vienna  
AUTRICHE



NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(PCT Rule 71.1)

Date of mailing  
(day/month/year)

09.05.2005

Applicant's or agent's file reference  
R 42991

### IMPORTANT NOTIFICATION

International application No.  
PCT/EP2004/000162

International filing date (day/month/year)  
13.01.2004

Priority date (day/month/year)  
14.01.2003

Applicant  
MATTNER, Frank

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international  
preliminary examining authority:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Rauf, A

Tel. +49 89 2399-7548






# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference<br>R 42991   |  | <b>FOR FURTHER ACTION</b>  |  | See Form PCT/IPEA/416                        |
| International application No.<br>PCT/EP2004/000162   |  | International filing date (day/month/year)<br>13.01.2004                 |  | Priority date (day/month/year)<br>14.01.2003 |
| International Patent Classification (IPC) or national classification and IPC<br>C07K14/47, A61K38/08   |  |  |  |  |
| Applicant<br>MATTNER, Frank  |  |  |  |  |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> |  |  |  |  |
| <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input checked="" type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>   |  |  |  |  |
| Date of submission of the demand<br><br>10.08.2004   |  | Date of completion of this report<br><br>09.05.2005                      |  |  |
| Name and mailing address of the international preliminary examining authority:<br> European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465  |  | Authorized Officer<br><br>Mandl, B<br><br>Telephone No. +49 89 2399-8434 |  |  |



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/000162

**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-21 as originally filed

**Claims, Numbers**

1-9 as originally filed

**Drawings, Sheets**

1/5-5/5 as originally filed

- ☒ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

|                               |             |     |
|-------------------------------|-------------|-----|
| Novelty (N)                   | Yes: Claims | 1-9 |
|                               | No: Claims  |     |
| Inventive step (IS)           | Yes: Claims |     |
|                               | No: Claims  | 1-9 |
| Industrial applicability (IA) | Yes: Claims | 1-9 |
|                               | No: Claims  |     |

2. Citations and explanations (Rule 70.7):

**see separate sheet**

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**Box No. VI Certain documents cited**

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1. Certain published documents (Rule 70.10)

and /or

2. Non-written disclosures (Rule 70.9)

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

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**Supplemental Box relating to Sequence Listing**

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**Continuation of Box I, item 2:**

1. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this report has been established on the basis of:
  - a. type of material:
    - ☒ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☒ in written format
    - ☒ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in computer readable form
    - ☒ furnished subsequently to this Authority for the purposes of search and/or examination
    - ☒ received by this Authority as an amendment on
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional observations, if necessary:

**Re Item V.**

The following documents are referred to in this communication:

- D1:** WO 00/72880 A (NEURALAB LTD); December 2000  
**D2:** REINEKE U ET AL: "Identification of distinct antibody epitopes and mimotopes from a peptide array of 5520 randomly generated sequences" JOURNAL OF IMMUNOLOGICAL METHODS, vol. 267, no. 1, pages 37-51; 1 September 2002

**Article 33(3) PCT**

- i. The present application does not meet the criteria of **Article 33(1) PCT**, because the subject matter of claims 1-9 does not involve an inventive step in the sense of **Article 33(3)PCT** for the following reasons:
- ii. Document **D1** is considered to represent the most relevant state of the art. It discloses the use of N-terminal fragments of A $\beta$ 42 in a vaccine for Alzheimer's disease (AD). According to D1, N-terminal fragments of 2-20 residues are preferred over the intact A $\beta$ 42 because they provide a useful immunogenic response, they do not generate an immunogenic response against APP, they are simple to manufacture and they do not aggregate in the same manner as intact A $\beta$ 42 (D1: page 14, lines 19-29). D1 finally proposes to use mimetics (mimotopes) of A $\beta$ 42 as therapeutic agents (D1: page 16, lines 26-29).
- iii. In the light of D1, the problem to be solved by the present application is the making of the mimotopes as proposed in D1 in order to improve the available A $\beta$ 42 vaccine for Alzheimer disclosed in D1.
- iv. The methodology for the production of mimotopes was known to the skilled person. The applicant himself mentions the disclosures made by **D2** as the basis for the making of the mimotopes.
- v. The subject-matter of claims 1-5 and 9 lacks an inventive step because the incentive to make mimotopes was clearly derivable from D1 and the actual making of the

mimotopes required known technology only.

- vi. This inventivity objection is based on the fact that the claims have a very broad scope, and therefore comprise many types of compounds with various features. Consequently, for such a scope, the demonstration of an unexpected or surprising effect is impossible because, as it can be seen on page 19 of the present application (table 1) and on page 21 (table 2), already the 21 different peptides tested show a range of inhibitory capacity from none to strong. This also means that peptides are comprised in the scope of the claims which do not solve the problem posed.
- vii. However, it appears as if the present application describes peptides which, indeed, show an unexpected or surprising effect, i.e. strong inhibitory capacity. For such specific peptides, an inventive step could be acknowledged.
- viii. With regard to claim 6 the following is communicated: As described in the present application, antibodies which are specific for A $\beta$  but do not recognize APP were known in the art. From D1 it was already known that the vaccine should be based on N-terminal fragments because they do not generate an immunogenic response against APP. Consequently, the selection of an antibody specific for DAEFRH appears obvious and is not considered to make the method of claim 6 inventive in the light of documents D1 (which proposes to look for mimotopes) and D2 (which discloses the method). Dependent claims 7 and 8 only relate to features which are well known in the art and, therefore, cannot be used to overcome the inventive step objection directed against claim 6. Thus, claims 7 and 8 also lack an inventive step.

**Re Item VI.**

Document EP1361349, published on 12.11.2003, claims an earlier priority than the present application. The applicant is informed that, in the European phase, this document may become relevant for novelty aspects.

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

PCT/EP2004/000162

**Re Item VIII.**

Finally, it is communicated that the scope of claims 1-5 is broader than justified by the description because, as it can be seen from Tables 1 and 2, only some of the plurality of peptides claimed show in fact an inhibitory capacity, i.e. can be used for the preparation of a vaccine for AD (**Article 6 PCT**).